out these beds is also accounted for. (Quart. Journ. Geol. Soc., Pt. 4, 1896.)

Geological News.—Mr. R. P. Whitfield notes a new genus of Phyllocaridæ from the Lower Helderberg, near Waubeka, Wisconsin. He proposes the name *Entomocaris*, from the resemblance of the carapace to that of an ostracode entomostracan. (Bull. Amer. Mus. Nat. Hist., 1896.)

A recent paper by Mr. F. A. Bather gives a morphological description of *Uintacrinus socialis*, and discusses the relations of the genus to certain Paleozoic crinoids. He shows that Uintacrinus cannot be related either to the Camerata, as Jaekel has supposed, or to the Ichthyocrinidæ, as maintained by Von Zittel, Neumayer, and others. By a process of comparison and elimination he finally determines that of all the known genera Dadocrinus is probably the most nearly related to the ancestor of Uintacrinus. (Proceeds. London Zool. Soc. (1895) 1896.)

A new genus of fossil birds is reported from the Pliocene of South Australia. The specimens consisting of portions of a dozen birds were found at lake Collabonna. They are described by Messrs. Stirling and Lietz under the name *Genyornis newtonii*. The generic name refers to the conspicuous feature afforded by the relatively large size of the lower mandible. The femur indicates a gigantic bird, its dimensions surpassing those of *Pachyornis elephantopus*, and nearly equalling those of *Dinornis maximus*. (Trans. Roy. Soc. South Austral., XX, 1896.)

According to Lydekker, the affinities of the so-called extinct Giant Dormouse (*Myoxus melitensis*) are not with the Myoxidæ, but with the Sciuromorpha. He suggests for it the new generic title *Leithia*, defining the genus, and figures its type of dentition. (Proceeds. Zool. Soc. London, 1895.)

BOTANY.[1]

Long Stolons of Phragmites.—Several years ago some remarkable specimens of a running grass were brought to me from the islands of the Platte River in Central Nebraska. Although quite puzzling at first they were soon found to belong to the common Reed Grass (*Phragmites phragmites* [L.] Karsten). Some of the specimens were of astonishing length, one measuring a little more than seventeen meters! At every

[1] Edited by Prof. C. E. Bessey, University of Nebraska, Lincoln, Nebraska.

joint fibrous roots were sent out and from many of the joints there grew leafy stems, a meter or more in height. A careful investigation showed that these long trailing stems were at first underground stems, and that after growing under the surface for some distance, the sand had been removed by the shifting currents of water, thus exposing the stems to the air. These exposed stems, thereafter grew as stolons running over the surface as described above. I am told that occasionally these running stems almost entirely cover portions of the islands, and the broad sand-bars along the margins of the river.—CHARLES E. BESSEY.

Barnes and Heald's Keys to Mosses.—Botanists will welcome the new, revised and extended "Analytic Keys to the Genera and Species of North American Mosses" which appeared in January of the present year, as one of the Bulletins of the University of Wisconsin. The thick pamphlet includes about 220 octavo pages, eight of which are devoted to a brief introduction, thirteen to the key to the genera, eighty-one to the key to the species, and one hundred and eighteen to descriptions of the species and varieties which have been published since the issue of Lesquereux and James's Manual in 1884. Under the latter there are enumerated, six hundred and three forms, many of whose descriptions are here available for the first time to most American botanists. The work can not help but stimulate the collection and study of mosses, in the botanical departments of our colleges and universities, and it should do somewhat to excite the interest of pupils in the high schools, academies and other secondary schools in which pupils pursue elementary botany. There is no good reason why students who are admitted to the Freshman classes of our colleges and universities should be wholly ignorant of the structure and relationship of the mosses, and this book (which may be obtained for one dollar) will be helpful to all teachers and pupils who wish to make an effort to know something of these interesting plants.—CHARLES E. BESSEY.

VEGETABLE PHYSIOLOGY.

What is Leuconostoc mesenteroides?—This organism was first described by Cienkowsky in 1878, under the name of *Ascococcus mesenteroides*. He obtained his material from beet sugar vats, and described the organism as consisting either of rods or coccus forms. The gelatinous clumpy masses had been familiar to sugar makers for a